

DESCRIPTION

SEALING SYSTEM

This invention relates to the prevention or restriction of the emission of water droplets in an aerosol form from a lavatory bowl during the flushing of the lavatory bowl with water.

During flushing of the lavatory bowl with water, the turbulent flow of the water into the lavatory bowl, and the turbulent flow of water around the lavatory bowl, causes the creation of an aerosol containing air-borne water droplets, and the subsequent emission of the water droplets into the surrounding atmosphere.

The object of the present invention is to prevent or restrict the emission of the water droplets into the surrounding atmosphere, thereby preventing or minimising the contamination of the room environment, contamination of items or a nearby person by water droplets, or the inhalation of water droplets by a nearby person.

According to the present invention the sealing system comprises a seal integral to the lavatory seat that seals to the lavatory bowl, and a seal integral to the lavatory lid that seals to the lavatory seat such that when the lavatory seat and lid are lowered prior to flushing of the lavatory bowl with water, the emission of an aerosol containing air-borne water droplets to the surrounding atmosphere is prevented or restricted.

In one embodiment of the invention the seals form an integral part of the lavatory seat and the lavatory lid by mould-forming, adhesive attachment or attachment by mechanical means.

The seals are of a resilient material which will deform under the self-weight of the lavatory seat and self weight of the lavatory lid thereby creating a seal against the aerosol with air-borne water droplets and preventing or restricting the emission of air-borne water droplets to the surrounding atmosphere.

One embodiment of the invention will now be described by way of example only with reference to the accompanying drawings.

Figure 1 is a plan view of the underside of the lavatory lid (Figure 1A) and a plan view of the underside of the lavatory seat (Figure 1B) showing the locations of the seals.

Figure 2 is a side elevation of the lavatory bowl, the lavatory seat and the lavatory lid assembly showing the invention as an assembly.

Figure 3 is an enlarged cross-sectional view of the sealing system assembly in the closed position and showing the components in the functional locations of the invention.

Referring to Figure 1A, the seal 10 is an integral component to the underside of the lavatory lid 11. In one embodiment of the invention the seal forms an integral part of the lavatory lid by mould-forming, adhesive attachment or attachment by mechanical means, for example in a groove in the underside of the lavatory lid. The lavatory lid has a hinge 12 in the same manner as a traditional lavatory lid.

Referring to Figure 1B, the seal 13 is an integral component to the underside of the lavatory seat 14. In one embodiment of the invention the seal forms an integral part of the lavatory seat by mould-forming, adhesive attachment or attachment by mechanical means, for example in a groove in the underside of the lavatory seat. The lavatory seat has a hinge 15 in the same manner as a traditional lavatory seat.

Referring to Figure 2, the assembly is shown with the lavatory lid 11 and the lavatory seat 14 connected to the lavatory bowl 17 by a hinge pin 16. The lavatory lid 11 and the lavatory seat 14 can be raised or lowered using the hinge in the same manner as a traditional lavatory seat. While using the lavatory the lavatory seat 14 is in the lowered position with the seal 13 resting on the lavatory bowl 17. After use of the lavatory, the lavatory lid 11 is lowered onto the lavatory seat 14 with the seal 10 resting on the lavatory seat 14, thereby affecting a closing seal to the lavatory bowl 17 by the self-weight of the lavatory lid 11 on the lavatory seat 14 and the self-weight of the lavatory seat 14 on the lavatory bowl 17, prior to flushing of the lavatory bowl with water.

Referring to Figure 3, the cross-sectional view shows the assembly in the closed position with the lid seal 10 sealing the lavatory lid 11 to the lavatory seat 14 and the seal 13 sealing the lavatory seat 14 to the lavatory bowl 17. When the lavatory is flushed with water the invention creates a seal or restriction against the aerosol containing air-borne water droplets thereby preventing or restricting the emission of air-borne water droplets into the surrounding atmosphere.